

## DAILY FIELD ACTIVITY REPORT

**PROJECT NAME:** Pre-Remedial Design Investigation and Baseline Sampling, Portland Harbor Superfund Site

<b>DATE:</b> May 2, 2018	<b>WEATHER:</b> Overcast in AM, mostly sunny in PM, temperatures in the ~60s.
<b>Personnel and Visitors Onsite:</b> Research vessel Tieton - <u>CDM Smith</u> : Wardah Azhar; <u>AECOM</u> : Anthony Palmieri; <u>Geosyntec</u> : Adam McGuire; <u>Gravity Marine</u> : Rene Trudeau, Chad Furulie.  Research vessel Cayuse – <u>CDM Smith</u> : Julee Trump; <u>AECOM</u> : Mark Tauscher; <u>Geosyntec</u> : Luke Smith; <u>Gravity Marine</u> : Peter Jenkins, Jeff Schut	
<b>Planned Activity:</b> <ul style="list-style-type: none"><li>• Collect surface sediment samples at SMA targeted sample locations near river mile (RM) 4</li><li>• Collect surface sediment samples at SMA sediment samples in Swan Island Lagoon.</li></ul>	
<b>Activity Completed:</b> <p>A tailgate safety meeting was led by AECOM. Topics included hydration and unexpected boating hazards (waves, debris, etc.), boat traffic, and slips/trips/falls.</p> <p>Wardah Azhar performed oversight of surface sediment sampling at SMA targeted sediment locations from 08:00 to 17:30 on board the Tieton. Specific activities completed by the AECOM/Geosyntec team, with vessel support from Gravity Marine, are as follows:</p> <ul style="list-style-type: none"><li>• 3-point composite surface sediment samples were collected at eight SMA locations between RM 3.8 and RM 4.5.</li><li>• Other activities included decontamination of sampling equipment using Alconox and deionized/distilled water and housekeeping of the sampling area.</li><li>• Position checks at PH-2 indicated that the vessel GPS was reading within 1.04 meters of the PH-2 survey coordinates, meeting the 1-2 m accuracy specification in the FSP.</li></ul> <p>Julee trump performed oversight of surface sediment sampling at random stratified locations from 08:00 to 17:00 on board the Cayuse. Specific activities completed by the AECOM/Geosyntec team, with vessel support from Gravity Marine, are as follows:</p> <ul style="list-style-type: none"><li>• Position checks at PH-2 indicated that the vessel GPS was reading within 1.4 meters of the PH-2 survey coordinates, meeting the 1-2 m accuracy specification in the FSP.</li><li>• 3-point composite surface sediment samples were collected from 5 sediment management area (SMA) locations in Swan Island as summarized below. Activities included decontamination of sampling equipment using Alconox and deionized/distilled water and housekeeping of the sampling area.</li><li>• Rinsate blank was collected at the end of the day.</li><li>• Fathometer bar check was completed.</li><li>• MS/MSD collected</li></ul>	
<b>Status of Schedule &amp; Priority Work:</b> <ul style="list-style-type: none"><li>• The SMA targeted sampling will continue through the week. AECOM/Geosyntec are starting to explore areas previously skipped in favor of areas where soft sediments were anticipated. Geosyntec/AECOM indicated that they plan to implement the EPA's methods communicated to them on 4/20/2018 with two samples where hard sediments are encountered.</li><li>• Sample locations in areas of known/encountered heavy petroleum hydrocarbon contamination are planned to be skipped and returned to with support from NRC Environmental Services to contain sheen during sampling.</li><li>• Sampling is taking more time than initially projected.</li></ul>	
<b>Issues/Concerns/Resolutions (include work performed that was not planned or anticipated):</b> <p>SMA location SG-S214 was located at the side/base of a gravel boat ramp. Grabs returned gravel cobbles and sand similar to construction materials for a boat ramp but could not be sampled in 7 attempted grabs. Grabs also recovered 15-25 total observed clams, a buried and apparently abandoned rusty/disconnected cable, and woody debris. 1 grab had low recovery. 1 grab could not be pulled out of the water (Gravity suspected it was caught on the abandoned cable). 5 grabs returned with partial or complete washout due to sediment loss from the grab sampler.</p>	

During sampling at SG-S204 There was some discussion about the EPA methods. 5 grabs returned with low recovery due to hard sands with no grabs over 20 cm recovery. Geosyntec indicated that they planned to continue to take grabs and if they recovered >20 cm, an aliquot from the >20 cm grab would replace the 3<sup>rd</sup> aliquot with less than 20 cm. Julie Trump said that her understanding was that the EPA method called for sampling the first 3 grabs with enough recovery to sample and that met the other acceptance criteria, and the stated AECOM plan did not seem to be in accordance with EPA's method as she understood it. AECOM/Geosyntec decided to stop at 6 grabs. No grabs recovered >20 cm, so the first 3 aliquots were used in the sample in accordance with EPA's method. This sample is being archived for later analysis if needed.

At location SG-S204, hard sediment was encountered and EPA hard sediment sampling protocol of 4/20/2018 was implemented. The EPA oversight staff had to explain that the sampling crew was not following the protocol correctly (they initially attempted to replace bowl 1 grabs with subsequent >20cm grabs) but ultimately the bowl 1 with the three initial grabs was completed and 3 subsequent grabs were collected at <20 cm so the crew discard those and therefore the crew did not retain a bowl 2 sample. Because SG-204 is an SMA location, the requirement to step out to Alternative 1 location does not apply. Geosyntec sent the sample to be archived to the lab for future discussion of analysis.

Geosyntec indicated that locations that could not be sampled such as SG-S204 (discussed above), and SG-S224 (covered by permanently parked barge) will be discussed for potential expansion of the sampling radius or other options for sampling, since sampling efforts were unable to achieve any grabs > 20 cm.

Sampling crews continue to require clarification from oversight staff on how to implement EPA's hard sediment sampling protocols of 4/20/2018. Currently field crews have indicated that they will not accept any grab for an aliquot if recovery is <10 cm. Additionally and as partially described above at SG-S204, AECOM/Geosyntec indicates it highly desired to them to include an aliquot with >20 cm recovery in the 'thin' sample, instead of just taking the first 3 aliquots that meet all other acceptance criteria but not necessarily the recovery requirement.

**Samples Collected, Measurements Made, Photographs: (List Locations, Matrix & Sample type):**

On the Tieton, SMA targeted surface sediment samples were collected between RM 3.8 and 4.5, approximately, at the following locations:

- PDI-SG-S037 – Within 25 ft radius, dark gray sandy silt
- PDI-SG-S039 – Within 50 ft radius, dark gray sandy silt
- PDI-SG-S038 – Within 25 ft radius, dark gray sandy silt near top, stiff silt with sand at the bottom
- PDI-SG-S040 – Within 50 ft radius, dark gray sandy silt
- PDI-SG-S041 – Within 25 ft radius, dark gray sandy silt
- PDI-SG-S043 – Within 25 ft radius, dark gray sandy silt
- PDI-SG-S044 – Within 25 ft radius, dark gray sandy silt
- PDI-SG-S062 – Within 25 ft radius, dark gray sandy silt

Note: Sediment descriptions are simplified and AECOM/Geosyntec provided more detailed sediment descriptions in their sampling notes.

On the Cayuse, the following surface sediment samples were collected at SMA locations in Swan Island Lagoon between RM 8.3 and 9.3:

- PDI-SG-S239 – Within 25 ft radius, silt with trace fine sand, trace organics, and trace orange oxidized tubes
- PDI-SG-S242 – Within 50 ft radius, brown over black sand, trace gravel, organics, tiny clams (<1 cm), trace trash
- PDI-SG-S236 – Within 25 ft radius with MS/MSD, silt with trace fine sand, orange oxidized tubes, trace organics, clay, pieces of plastic and food waste (shrimp tails)
- PDI-SG-S233 – Within 50 ft radius, silt with trace sand with trace organic debris, oxidized tubes, midge
- PDI-SG-S204 – 'Thin' sample (<20 cm recovery) collected per EPA method within 25 ft radius, sandy silt over sand with moderate to substantial organic content, small pieces of trash, unidentified small white particulate (similar in size to sand), woody debris, clams. Grabs with >20 cm recovery were not achieved, so a 'thick' sample was not collected.

Note: Sediment descriptions are simplified and AECOM/Geosyntec provided more detailed sediment descriptions in their sampling notes.

Photographs of work were taken throughout the day and provided to EPA via email. Additional photos were taken and archived with a description included in the photolog Excel spreadsheet, which are maintained electronically in the ProjectWise project folder.

<b>Borings Completed (Include total footage drilled for each boring):</b> None	
<b>Wastes Generated and How Handled:</b> <ul style="list-style-type: none"> <li>Excess sediment and debris in the power grab sampler and in the sampling, bowls was rinsed back into the river per the FSP. No heavy sheen was observed.</li> <li>Disposable gloves, paper towels, and other general trash was containerized in a trash bag and removed daily as needed for disposal to a municipal waste management dumpster.</li> </ul>	
<b>Health and Safety Issues, Equipment Needs, Staffing:</b> None	
<b>Signature:</b> Wardah Azhar, Julee Trump _____	<b>DATE</b> May 2, 2018 _____

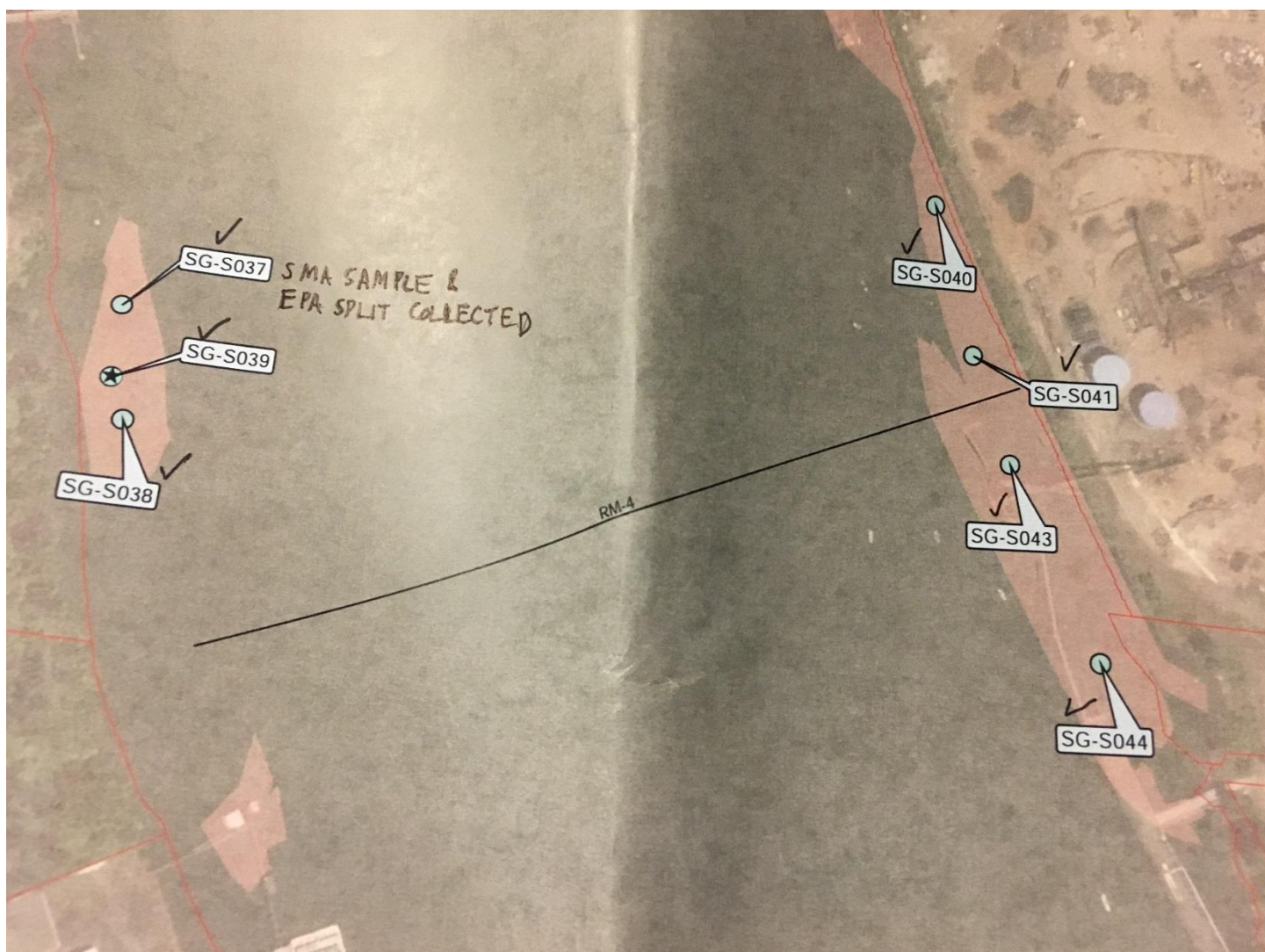


Figure 1: SMA targeted sampling field location notes (Tieton)

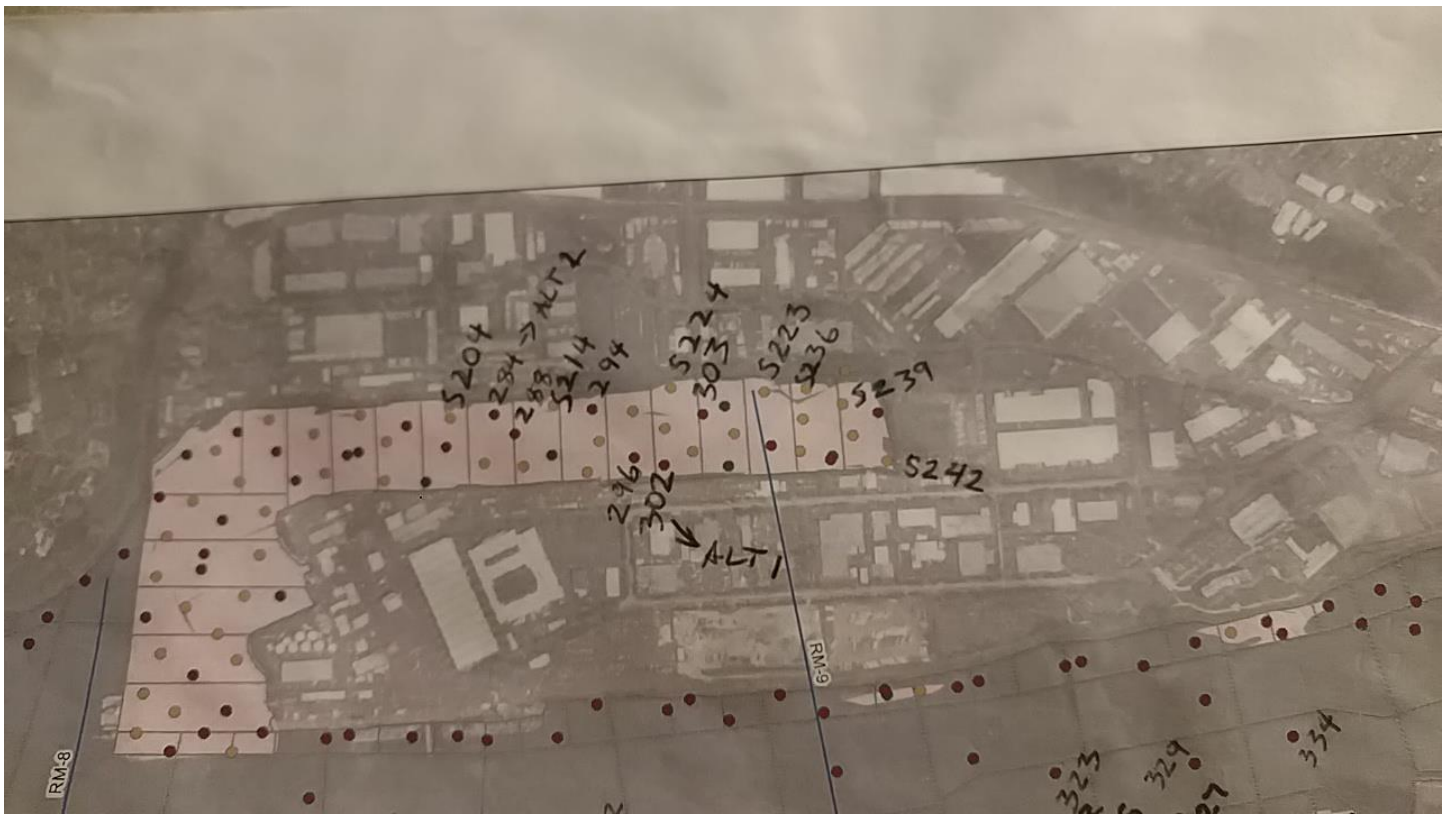


Figure 2: SMA targeted sampling field location notes (Cayuse). SMA samples start with "S"